

ABSTRACT

Rhenium-tungsten alloys including rhenium and from about 0.025% to less than about 10% by weight tungsten. The rhenium-tungsten alloys are formed by a process that includes coating rhenium metal powders with a liquid including a tungsten compound, drying the coated rhenium powder, compressing the dried coated powder to form a compact, and then sintering the compact to form the rhenium-tungsten alloy. The rhenium-tungsten alloys according to the invention exhibit mechanical properties that are superior to high-purity rhenium metal without a loss in ductility.